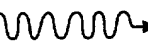


Blue: Yb - Er Transfer
 Green: $4I_{13/2}$ Quenching
 Red: Er - Yb Back Transfer
 Multiphoton Relaxation

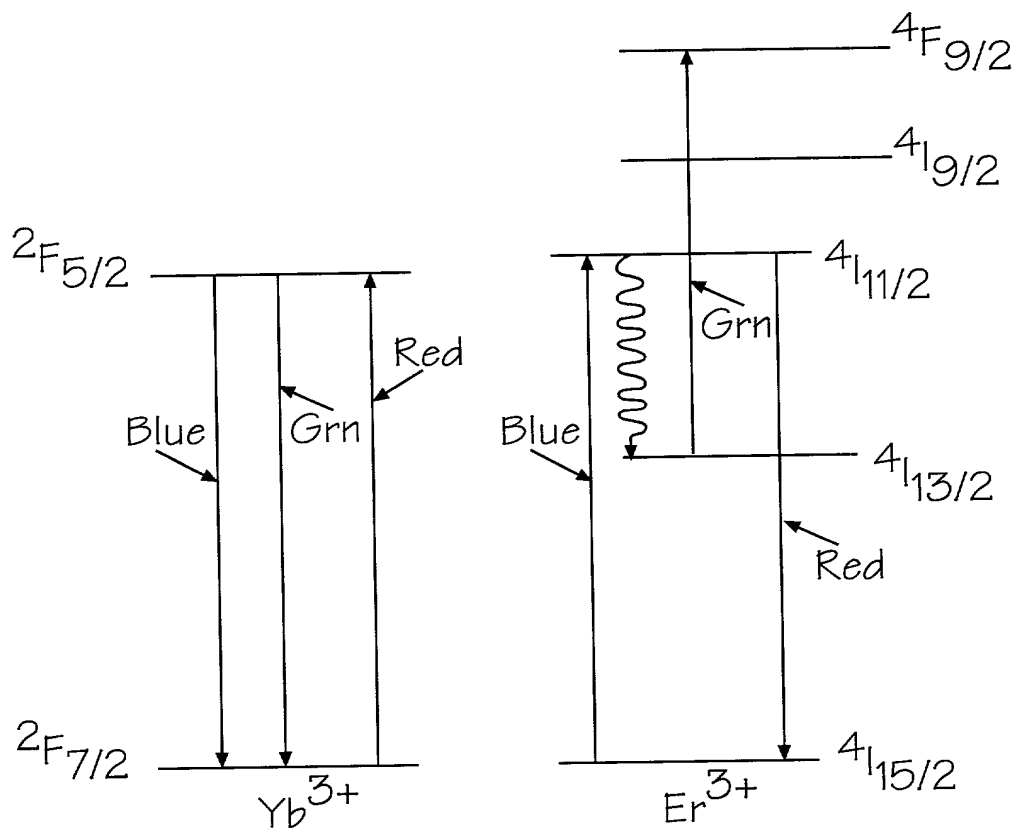


Figure 1

105210-224860

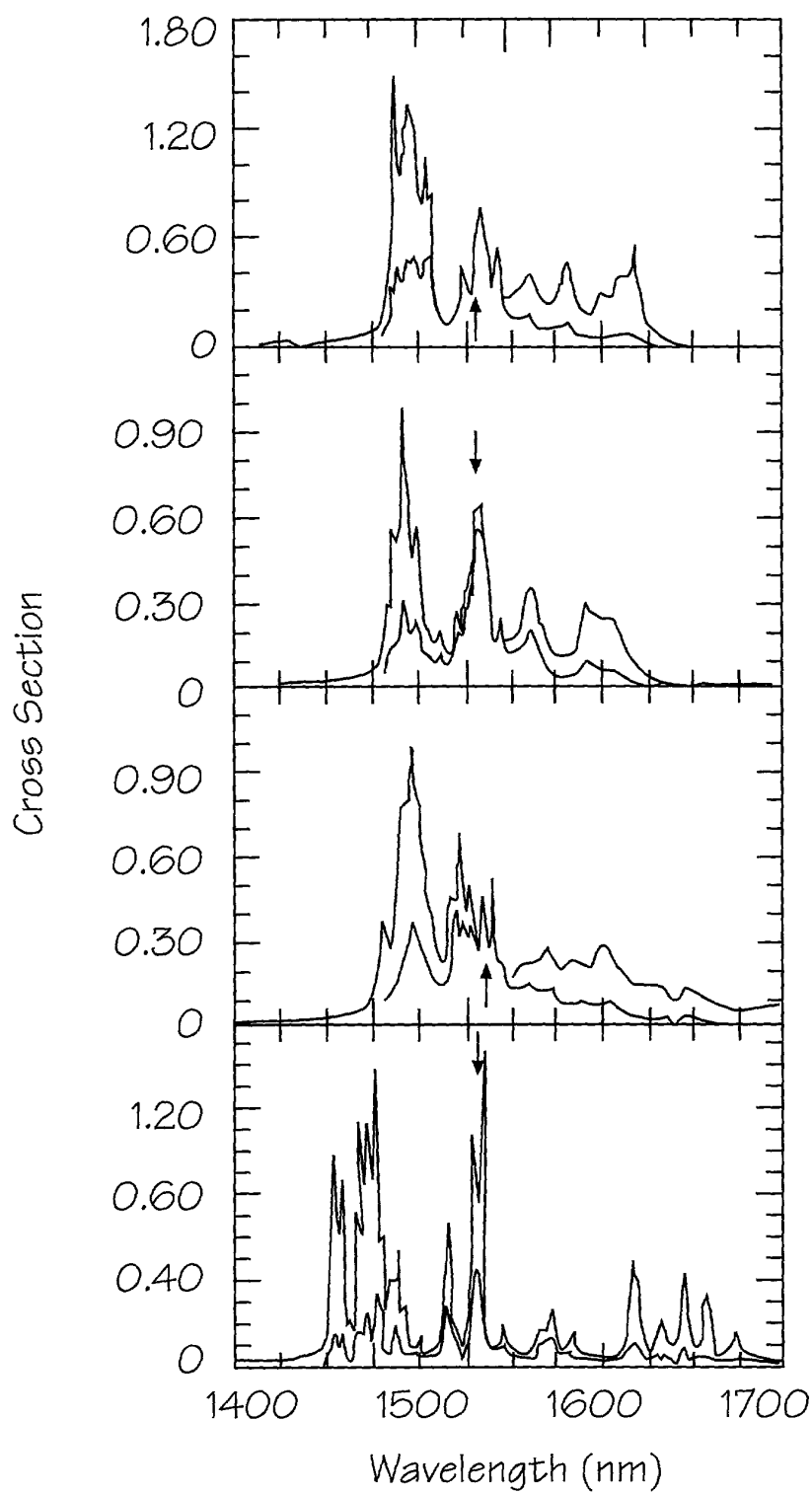


Figure 2a

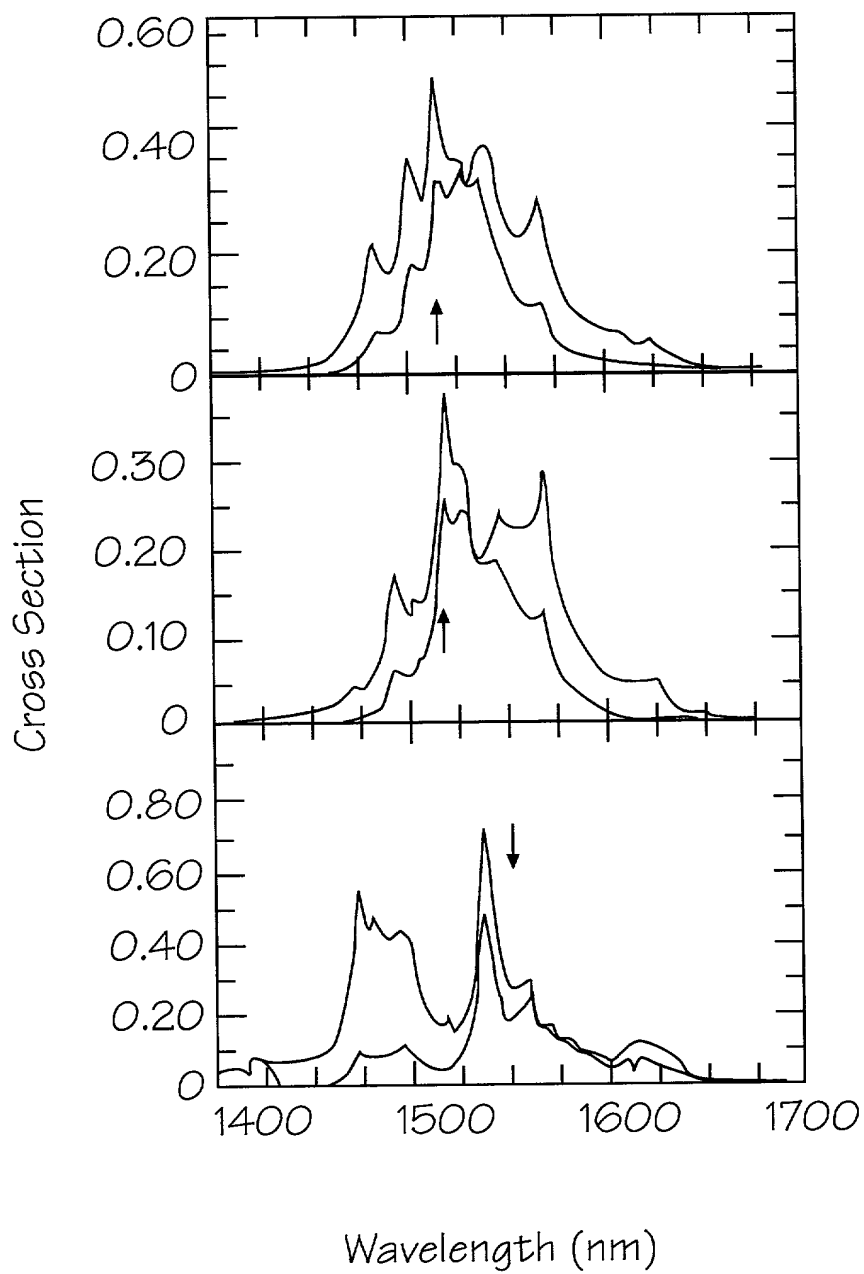


Figure 2b

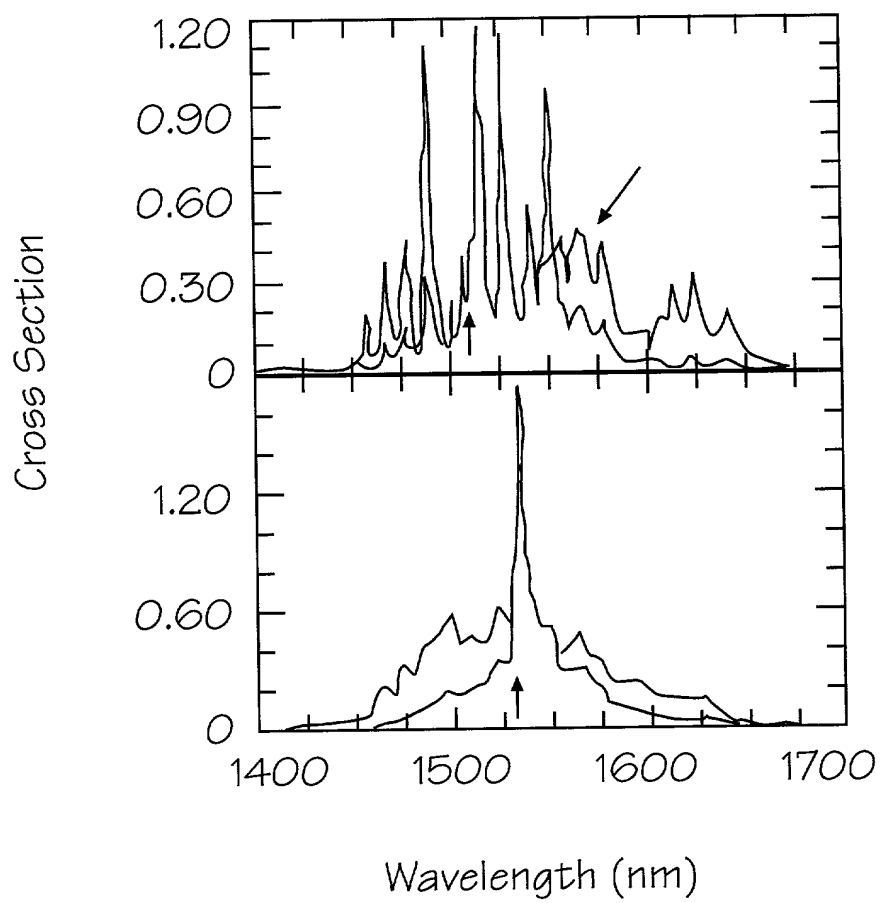


Figure 2c

Tm:Ho:YAG
Best fit 0.19msec
Effective Energy Storage
Lifetime

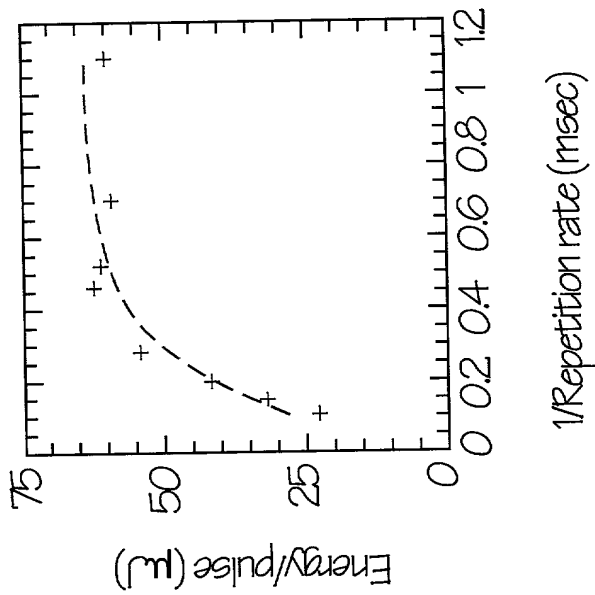


Figure 3a

Ho:YAG
Best fit 3.3msec
Effective Energy Storage
Lifetime

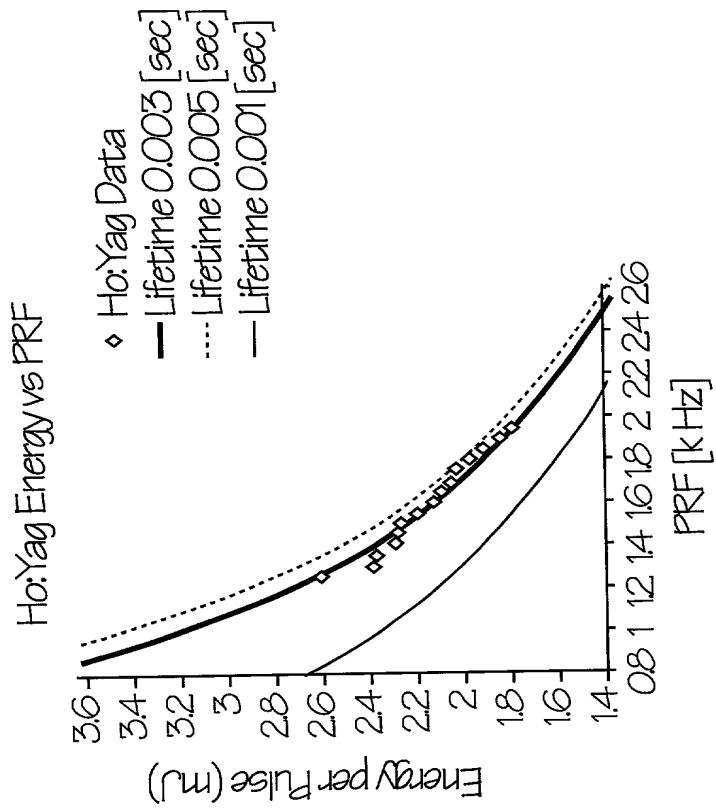


Figure 3b

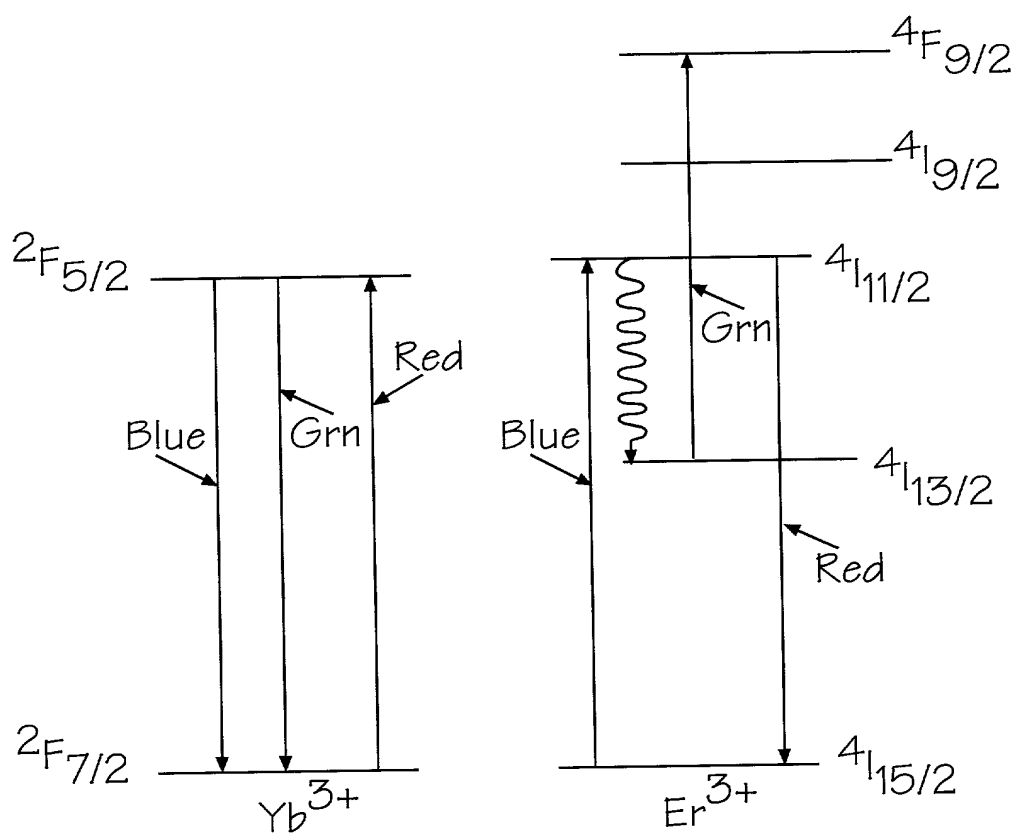


Figure 4

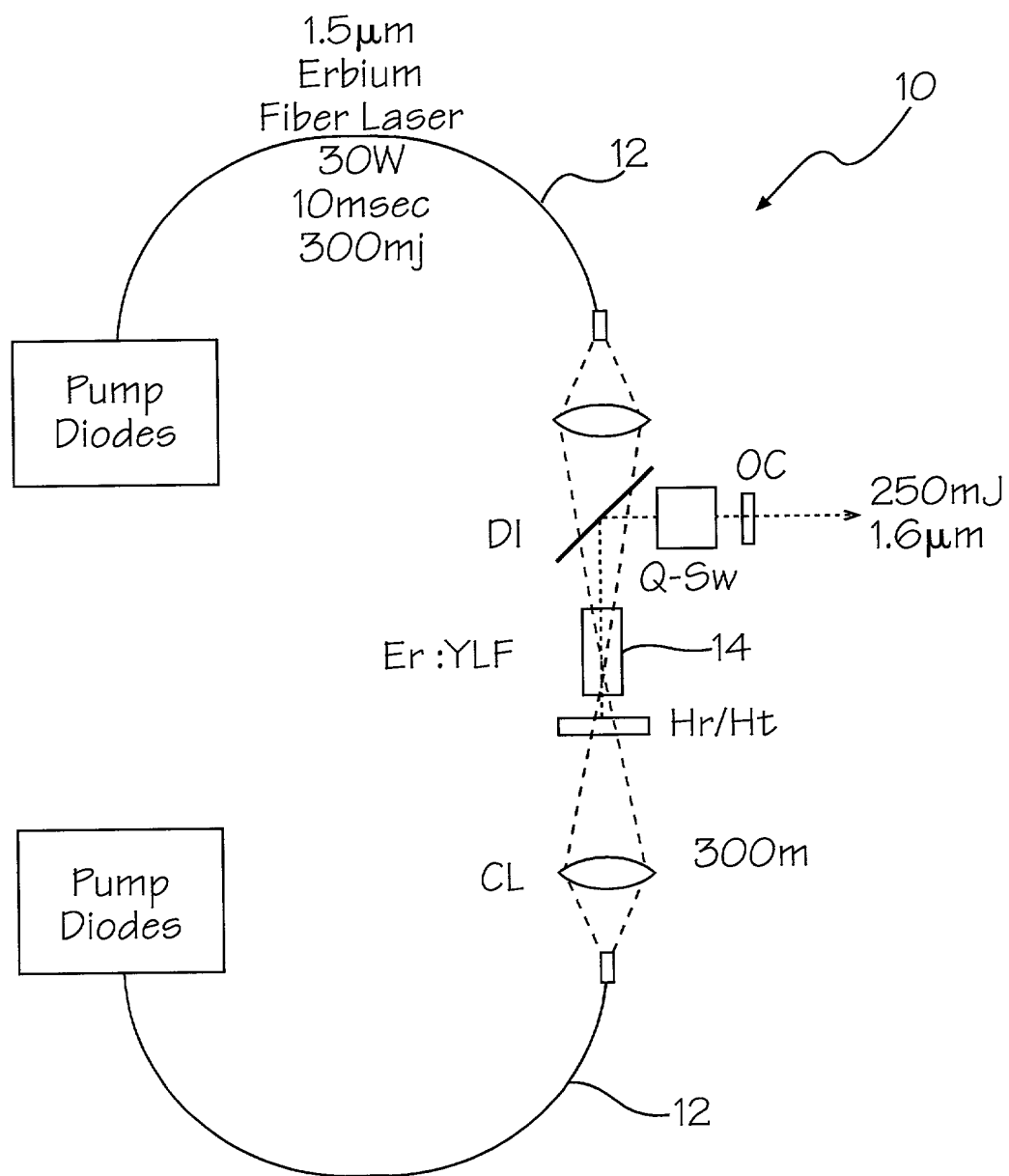


Figure 5